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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,913	03/23/2004	Michael L. Fripp	2003-IP-012785 U1 USA	3886
30652	7590	06/21/2006	EXAMINER	
CONLEY ROSE, P.C. 5700 GRANITE PARKWAY, SUITE 330 PLANO, TX 75024			SMITH, MATTHEW J	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/806,913

Applicant(s)

FRIPP ET AL.

Examiner

Matthew J. Smith

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-23, 32, 34, 35, 37, 38, 42-50 and 52-55 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 24-31, 33, 36, 39-41 and 51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 23Mar04, 18Feb05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "110" [0031], [0032] has been used to designate both a heat sink and a formation. Please note, the specification states the heat sink "absorbs the heat and dissipates it to the air", which cannot be the formation.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8, 10, 11, 15, 17, 18, 34, 35, 37, 38, 44-47, and 52-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Scherbatskoy (4416000).

Scherbatskoy discloses an apparatus and method and of preparing an energy storage device for powering a downhole tool 30, comprising: heating an energy storage device or battery 155 to an effective temperature to improve operability of the energy storage device; the effective temperature is greater than an ambient temperature in the wellbore near the energy storage device; the energy storage device heated by an ohmic heater; the heater positioned proximate the energy storage device; the heat source and the energy storage device are surrounded by a metalized-film thermal insulator 157; the heat transfer medium cooled by lowering the medium downhole; the energy storage device heated using heat generated by the discharge of the energy storage device; the energy storage device being battery cells operably connected in an electrical series configuration or in an electrical parallel configuration (col. 3, line 25); the energy storage device is heated by converting non-heat energy (e.g., air in jacket 157) to heat energy; a device 160 for generating the energy is lowered into the wellbore on an oil field conduit 24; the energy conveyed from the surface; and an electrical load (col. 3, line 23) operably connected to the energy storage device and the downhole tool.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3672

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 14, 16, 19, 20, 42, 43, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy in view of Blake (4314008).

Scherbatskoy discloses the invention substantially as claimed but not a thermal conductor that extends between the heat source and the energy storage device, the heat source and the energy storage device are at least partially surrounded by an electrical insulator, the energy storage device heated by changing a temperature of a heat transfer medium positioned proximate the energy storage device causing the heat transfer medium to undergo a phase transformation such that it releases or absorbs heat, a heat transfer medium is used to regulate thermal loss from the energy storage device; the energy storage device heated by an external heat source, a thermal conductor extending between the heat source and the energy storage device, or a heat pump used to perform both heating and cooling such that a temperature of the energy storage device is regulated to improve its operability.

Blake presents a thermal conductor 45 that extends between a heat source or cooling source-heat pump 16- and an energy storage device 15; the heat source and the energy storage device surrounded by an electrical insulator 62; the energy storage device heated by changing the heat transfer medium 45 temperature positioned proximate the energy storage device causing the heat transfer medium to undergo a phase transformation such that it releases or absorbs heat; the heat transfer medium

used to regulate thermal loss from the energy storage device; and the energy storage device heated by an external heat source 16.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a heat transfer medium and insulator, as presented by Blake, in the Scherbatskoy device in order to design a cell that operates at temperature extremes (Blake, col. 2, lines 5-6).

Claims 12, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy in view of Ashtiani et al. (6259229).

Scherbatskoy discloses the invention substantially as claimed but not an energy storage device surrounded by an electrical or thermal insulator.

Ashtiani et al. discuss (col. 2, lines 9-10) an energy storage device surrounded by an electrical insulator; a thermal insulator surrounding the heat source and the energy storage device; and an electrical insulator surrounding the energy storage device.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a thermal and electrical insulator around the Scherbatskoy battery, as discussed by Ashtiani et al., since it is well known to do so.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy in view of Ashtiani et al. as applied to claim 12 above, and further in view of Reiss et al. (4692363).

The combination discloses a thermal and electrical insulator around a battery but not an electrical insulator being a ceramic solid, ceramic fibers, a glass solid, glass fibers, a polymer solid, polymer fibers, a mineral solid, mineral fibers, a foamed polymer or epoxy, a Dewar flask, a silica aerogel, a dielectric powder, or nanostructured combinations.

Reiss et al. show glass fiber insulation for a battery 18.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a glass fiber for insulation, as shown by Reiss et al., in order to use an insulation withstanding high temperature and having low volume (Reiss et al., col. 2, lines 32-40).

Claims 21-23 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy in view of VanBerg, Jr. (5202194).

Scherbatskoy discloses the invention substantially as claimed but not a fuel cell, heated by pre-heating a reactant being supplied to the fuel cell, the reactant pre-heated by heat exchange with the fuel cell, the reactant pre-heated by heat generated by the

fuel cell as the reactant passes through a feed line to the fuel cell, or the reactant pre-heated by heat generated by a downhole tool powered by the fuel cell.

VanBerg, Jr. describes a downhole fuel cell 12 heated by pre-heating a reactant, via line 62, being supplied to the fuel cell; the reactant pre-heated by heat exchange with the fuel cell; the reactant pre-heated by heat generated by the fuel cell, at 56, as the reactant passes through a feed line to the fuel cell; and the reactant pre-heated by heat generated by a downhole tool powered by the fuel cell.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a fuel cell with a heat exchanging system, as described by VanBerg, Jr., in order to power a downhole system

***Allowable Subject Matter***

Claims 6, 7, 24-31, 33, 36, 39-41, and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Smith whose telephone number is 571-272-7034. The examiner can normally be reached on T-F, 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

MJS *MJS*  
6 June 2006